

REMARKS**I. Introduction**

Claims 1-6 and 8-21 are pending in the above application.

Claim 3 stands objected to for a minor informality.

Claims 1-6 and 8-21 stand rejected under 35 U.S.C. § 103.

Claims 1 and 18 are the independent claims.

II. Amendments

Claims 1 and 18 have been amended to more particularly point out what applicant regards as the invention therein.

Claim 3 has been amended to depend on claim 2 to eliminate an antecedent basis concern raised by the examiner.

No new matter has been added.

III. Prior Art Rejections

A. Claims 1, 5-6, 8-14 and 18-21 stand rejected under 35 U.S.C. § 103 as being unpatentable over Ali (U.S. Pat. 4,726,010) in view of Campbell (LIGHTWAVE Magazine).

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in

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the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also *In re Lee*, 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002) (discussing the importance of relying on objective evidence and making specific factual findings with respect to the motivation to combine references); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). See MPEP 2143.01.

Neither Ali nor Campbell, taken alone or in combination, disclose or suggest a communications network which uses a central terminal coupled to a PON and a plurality of user terminals, the central terminal having an optical transmitter for transmitting a shared downstream signal, a first group of optical receivers configured to receive upstream signals from coarse WDM lasers associated with a first group of user terminals each having an optical transmitter that includes a coarse WDM laser, and a second group of optical receivers configured to receive upstream signals from dense WDM lasers associated with a second group of user terminals each having an optical transmitter that includes a dense WDM laser, as set forth by amended claims 1 and 18. Ali discloses to an optical communication system which transmits a shared TDM signal of wavelength λ_0 to subscribers 3a and 3n (Fig. 2; col. 2: 30-59), and each of the subscribers provides an upstream signal of an assigned wavelength λ_1 to λ_n (col. 3: 26-56). As recognized by the Office action, Ali does not disclose or suggest a communication system which uses both a course laser and a dense laser.

Campbell merely discloses the existence of course wavelength-division multiplexing (CWDM) and dense wavelength-division multiplexing (DWDM) (pages 1-

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2). However, Campbell also does not disclose or suggest a central terminal which transmits a shared downstream signal and receives signals from both course WDM lasers and dense WDM lasers.

Campbell even teaches away from attempting to design a system using both course WDM and dcnsc WDM, stating: "the difference between the packaging of DWDM lasers and CWDM lasers is analogous to comparing a Formula One race car and a standard passenger car" (Campbell, pg. 2). Campbell further explains "to become widely adopted, CWDM systems will need [components omitted] ... these components cannot simply be retrofitted from DWDM systems" (Campbell, pg. 2). Finally, Campbell makes it clear that CWDM and DWDM are thought of as alternative systems, not as systems to be used in combination with each other, at least by posing the question: "if DWDM filter prices fall, doesn't that eliminate the need for CWDM?" (Campbell, pg. 2). As it is well established that the prior art must provide the motivation to combine and that it is improper to combine references where the references teach away from their combination, the combination of Campbell with Ali to attempt to establish the claimed invention is improper. See, MPEP 2145 X.D.2, citing *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983).

Accordingly, as neither Ali nor Campbell disclose or suggest all of the claimed limitations, the combination of Ali and Campbell does not render amended claim 1, nor claims 5-6 and 8-14 which depend on amended claim, nor amended claim 18, nor claims 19-21 which depend on amended claim 18, as obvious. Moreover, as Campbell does not suggest combining CWDW and DWDW systems and even appears to teach away from

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combining such, the combination of Campbell and Ali to attempt to establish the claimed invention is improper.

B. Claims 2-4 and 15-17 stand rejected under 35 U.S.C. § 103 as being unpatentable over Ali in view of Campbell and further in view of Ramaswami (*Optical Networks, A Practical Perspective*).

Claims 2-4 and 15-17 depend on amended claim 1 and incorporate all of the limitations thereof. 35 U.S.C. § 112 ¶ 4. As discussed above, neither Ali nor Campbell, taken alone or in combination, disclose all of the limitations of amended claim 1, and the combination of Ali and Campbell is improper. Ramaswami merely discloses conventional components of optical systems. The addition of Ramaswami does not cure the defects of combination of Ali and Campbell. Accordingly, the combination of Ali, Campbell and Ramaswami also does not disclose all of the limitations of claims 2-4 and 15-17 is also improper.

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IV. Conclusion

Having fully responded to the Office action, the application is believed to be in condition for allowance. Should any issues arise that prevent early allowance of the above application, the examiner is invited contact the undersigned to resolve such issues.

To the extent an extension of time is needed for consideration of this response, Applicant hereby request such extension and , the Commissioner is hereby authorized to charge deposit account number 502117 for any fees associated therewith.

Respectfully submitted,

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